

Design Document:

Scavenge What remains

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Course: CS5610

1. Project Description

This project is a text-based survival game presented as a web application.

The core gameplay revolves around reading environmental descriptions provided by the website, which narrate what the player encounters in the world.

The core game play: From these textual descriptions, players can discover and collect items, choose to experiment with them through crafting, or read books/descriptions and take notes.

This design uses text as the primary medium to create immersion, while naturally supporting data-driven interactions such as notes, inventory management, crafting attempts, and progress saving.

Each member owns at least one separate MongoDB collection. Their features are designed so that they can be developed and tested independently using Node + Express + Vanilla ES6 + MongoDB.

Each member is responsible for writing one part of the game script.

2. User Personas

Alptug Guven:

1. Sammy (the Min-Maxing Tryhard)

They want to rush completing the game in the most optimal way possible. They need an inventory that tracks quantities and item properties, and clear text/UI that describes the functionality of each tool at their disposal so they can test combinations, optimize routes, and refine his strategy without repeating guesswork.

2. Johnny (the Completionist)

They want to get the best bang for their buck. This means as much content as possible. No matter how monotonous, he will find it engaging as long as he can grind it out effectively. He needs a **persistent inventory** (so he can collect everything), plus a **crafting log/journal** to track discoveries, recipes, and experiments across sessions.

Ruotian Zhang:

1. Rian (The Meticulous Investigator)

Enjoys deep, meaningful narratives and wants her choices to matter. She needs a notes system to capture and organize clues, revise theories, and a progress recovery mechanism so her investigation isn't lost across sessions or devices.

2. Charlie (The Casual Commuter)

Plays in short, interrupted sessions driven by curiosity and relaxation. He needs a simple, account-free way to save and restore progress across refreshes or devices.

3. User Stories

Alptug Guven:

Inventory System

1. As a player, I want to pick up an item mentioned in the story and add it to my inventory, so I can save resources for later. (Create)
2. As a player, I want to view my inventory as a list with quantities, so I can quickly understand what I have. (Read)
3. As a player, I want to use or discard an item (reducing quantity or removing it), so my inventory stays accurate and uncluttered. (Update/Delete)

Crafting System

1. As a player, I want to attempt crafting by combining items from my inventory, so I can experiment and discover useful recipes. (Create)
2. As a player, I want to view a crafting log of my past attempts and results, so I don't repeat useless experiments. (Read)
3. As a player, I want to star or annotate a crafting attempt, so I can remember which experiments mattered and why. (Update)
4. As a player, I want to delete old crafting attempts, so my log stays readable. (Delete)

Ruotian Zhang:

Note System

1. As a player, I want to click on narrative clues embedded in the story text to automatically save them as notes, so I can keep track of important information without manual copying. (Create)
2. As a player, I want to manually write my own notes, theories, or reminders using a form, so I can externalize my thinking like a real investigator. (Create)
3. As a player, I want to view my saved notes as a list or notebook, so I can easily review clues, observations, and past discoveries. (Read)

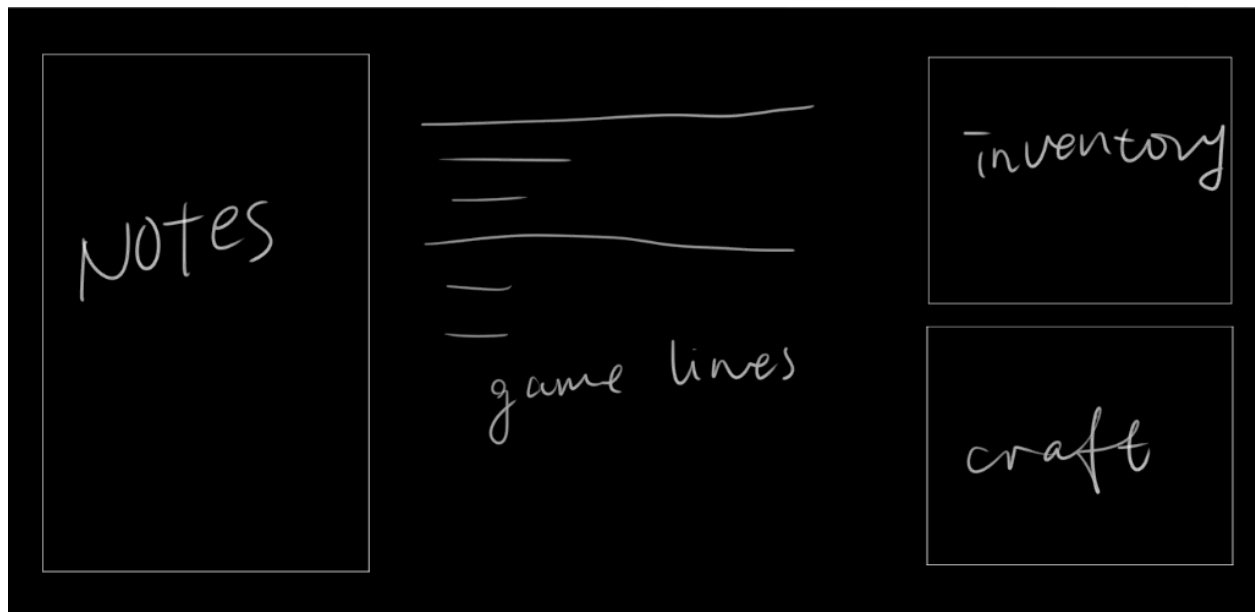
4. As a player, I want to edit or annotate my notes, so I can refine my understanding as I learn more about the world. (Update)
5. As a player, I want to delete notes that are no longer relevant after solving a puzzle, so my notebook stays organized and useful. (Delete)

Progress System

6. As a player, I want to generate a 6-digit Recovery Token that saves a snapshot of my current game state (notes + inventory + progress), so I can safely return later.
7. As a cross-device player, I want to enter my Recovery Token on another browser and restore my saved game state, so I can continue playing seamlessly.
8. As a player, I want the recovered state to match exactly what was saved at the time I generated the token, so saving feels reliable and predictable.

4. Design Mockups

Layout:



The interface uses a three-column layout that separates narrative, memory, and resources. The center panel displays interactive story text, where highlighted words can be collected to reveal progression.

The left Notes panel and right Inventory panel function as parallel archives, allowing players to track knowledge and gathered artifacts while reinforcing the game's investigative structure.

